

**REMARKS**

Reconsideration is requested.

Claims 2-3 and 11 have been canceled, without prejudice. Claim 30 has been added and finds support, for example, on pages 42-43 of the specification. Claims 1, 4-10 and 12-30 are pending. Claim 1 has been amended to include the details of now-canceled claims 2 and 3, without prejudice, to further distinguish the claimed invention.

The Section 112, second paragraph, rejection of claims 18-21 is obviated by the above amendments. Withdrawal of the rejection is requested.

The Examiner's acknowledgement that the claimed invention is novel over the art of record is noted with appreciation. The applicants submit that the claimed invention is patentable over the art of record and consideration of the following in this regard is requested.

The following list of art has been cited in the rejections of the claims contained in the Office Action of January 9, 2006, and the documents will be referred to herein by the document numbers, or "D" numbers, shown (which designations are the same as provided in the Remarks of the Amendment filed November 2, 2005):

D1 – U.S. Patent No. 6,773,102 (Chen);

D2 – U.S. Patent No. 5,496,874 (Fass);

D3 – U.S. Patent No. 5,630,868 (Belmont);

D4 – U.S. Patent No. 4,625,220 (Nagashima);

D5 – U.S. Patent No. 4,723,129 (Endo);

D6 – U.S. Patent No. 6,715,869 (Reem);

D7 – U.S. Patent No. 5,169,881 (Peters);

D8 – U.S. Patent No. 5,129,947 (Sharma);

D9 – U.S. Patent No. 4,990,593 (Blount);

D10 – U.S. Patent No. 6,046,253 (Erdtman);

D11 – U.S. Patent Application Publication No. 2003/0187098 (Chen);

D12 – U.S. Patent No. 6,344,497 (Meyrick);

D13 – U.S. Patent No. 5,716,436 (Sorriero);

D14 – U.S. Patent No. 5,464,883 (Sharma);

D15 – U.S. Patent No. 5,922,118 (Johnson); and

D16 – U.S. Patent No. 6,454,402 (Koitarbashi).

The following art rejections are understood to be asserted in the Office Action of January 9, 2006:

(1) Claims 1-10, 12-17 and 22-23 have been rejected as allegedly having been obvious over the combination of D1, D2, D3 and D16 (see paragraph number 6 of the Office Action dated January 9, 2006);

(2) Claims 26-29 have been rejected as allegedly having been obvious over the combination of D1, D4, D5 and D16 (see paragraph 7 of the Office Action dated January 9, 2006);

(3) Claims 1-6, 9-10 and 12-25 have been rejected as allegedly having been obvious over the combination of D6, D2, D7 and D16 (see paragraph number 8 of the Office Action dated January 9, 2006);

(4) Claims 7-8 have been rejected as allegedly having been obvious over the combination of D6, D2, D7, D16 and D15 (see paragraph number 9 of the Office Action dated January 9, 2006);

(5) Claims 27 and 29 have been rejected as allegedly having been obvious over the combination of D6, D2, D7, D16 and D5 (see paragraph number 10 of the Office Action dated January 9, 2006);

(6) Claims 1, 4, 6, 9-10, 12, 16 and 22 have been rejected as allegedly having been obvious over the combination of D8 and D16 (see paragraph number 11 of the Office Action dated January 9, 2006);

(7) Claims 2-3 have been rejected as allegedly having been obvious over the combination of D8, D16 and D13 (see paragraph number 12 of the Office Action dated January 9, 2006);

(8) Claim 5 has been rejected as allegedly having been obvious over the combination of D8, D16 and D13 (see paragraph number 13 of the Office Action dated January 9, 2006);

(9) Claims 7 and 8 have been rejected as allegedly having been obvious over the combination of D8, D16 and D15 (see paragraph number 14 of the Office Action dated January 9, 2006);

(10) Claims 27-29 have been rejected as allegedly having been obvious in view of D8, D16 and D5 (see paragraph number 15 of the Office Action dated January 9, 2006);

(11) Claims 1, 3, 4, 6, 9-10 and 12-25 have been rejected as allegedly having been obvious in view of D10 and D16 (see paragraph number 16 of the Office Action dated January 9, 2006);

(12) Claim 2 has been rejected as allegedly having been obvious over D10, D16 and D12 (see paragraph number 17 of the Office Action dated January 9, 2006);

(13) Claim 5 has been rejected as allegedly having been obvious over D10, D16 and D14 (see paragraph number 18 of the Office Action dated January 9, 2006);

(14) Claims 7 and 8 have been rejected as allegedly having been obvious over D10, D16 and D15 (see paragraph number 19 of the Office Action dated January 9, 2006);

(15) Claims 26-29 have been rejected as allegedly having been obvious over D10, D4, D5 and D16 (see paragraph number 20 of the Office Action dated January 9, 2006);

(16) Claims 1-6, 9-10, 12-17 and 22-23 have been rejected as allegedly having been obvious over D11, D2, D7 and D16 (see paragraph number 21 of the Office Action dated January 9, 2006);

(17) Claims 7 and 8 have been rejected as allegedly having been obvious over D11, D2, D7, D16 and D15 (see paragraph number 19 of the Office Action dated January 9, 2006); and

(18) Claims 26 and 28 have been rejected as allegedly having been obvious over D11, D4 and D16 (see paragraph number 19 of the Office Action dated January 9, 2006).

**Rejections (6) and (11)**

The recitations of now-canceled claims 2 and 3, which were not rejected in either of rejections (6) and (11), have been added to claim 1 to advance prosecution, without prejudice. The claims are submitted to be patentable over the combinations of art applied in rejections (6) and (11). Withdrawal of the rejections is requested.

**Rejections (1)-(5) and (16)-(18)**

The primary references in each of rejections (1)-(5) and (16)-(18) are reported by the Examiner to teach, as a polyester, "Eastman AQ 55" which the Examiner appears to equate to the polyester of the claimed invention.

The applicants note however that the polyester resin of the presently claimed invention contains a polybasic carboxylic acid ingredient which contains an aromatic carboxylic acid having a metal sulfonate group wherein the dicarboxylic acid having a metal sulfonate group is contained in the polybasic carboxylic acid ingredient by 0.5 mol% to 8 mol%.

D7 is understood to teach use of polyester resin Eastman AQ55 in an amount of 18mol%. The applicants submit, with due respect, that there was no motivation in the cited art to have made the presently claimed invention.

As claims 26-29 require the presence of the composition of claim 1, which the Examiner has not rejected over the combination of art stated in rejections (2) and (18), withdrawal of rejections (2) and (18) are requested.

The applicants note in that D1 and D11 teach the optional use of any of anionic, cationic, amphoteric or nonionic surfactants. See, column 10, lines 53-65 of D1 and ¶

[0030] of D11. The presently claimed invention requires the use of a nonionic surfactant. The present applicants have required a combination of a nonionic surfactant with the specifically claimed polyester to obtain the advantages described on page 11, lines 11-17 of the present specification. There is no teaching or suggestion or motivation in D1 or D11, or any of the other cited art, to combine a polyester of the claimed invention with a nonionic surfactant, as claimed.

In fact, the applicants note that D1 teaches that the method of D1 is

“suited for printing on a variety of non-absorbing substrates. The receivers that may be used in the present invention include any substrate that is essentially non-porous and has very low or no fluid absorbing capacity. Usually, these substrates are hydrophobic. Examples of such non-absorbing substrates are metal such as aluminum, copper, stainless steel and alloy etc.; plastics such as vinyl, polycarbonate, polytetrafluoroethylene (PTFE), polyethylene, polypropylene, polystyrene, cellulose; and other substrates such as ceramics, glass.

In order to achieve good image durability when printing aqueous based inks onto a non-absorbing substrate, the polymeric binder in the ink composition needs to be essentially hydrophobic, capable of providing good adhesion strength to the non-absorbing substrate, and also not be easily re-dispersible in water after drying. See, column 2, lines 40-65 of D1 (underlined emphasis added).

The substrates of D1 (and arguably D11) are non-absorbing and the polymer binder is chosen for its properties to adequately adhere to the surface of the essentially non-absorbing surface.

The process of D16 however involves increasing the penetrability of an ink composition onto the surface layer of a printing medium. See, column 2, lines 43-55 of D16. Acetylenol is used in D16 as a penetrating agent. See, column 21, lines 7-9 of

D16. One of ordinary skill in the art would not have looked to D16 to modify D1 or D11. One of ordinary skill in the art would not have added a nonionic surfactant of D16 to the polymers of D1 or D11 as the utility of Acetylenol to increase penetrability in D16 would have been contrary to the use of the hydrophobic binder of D1 or D11 to adhere to a non-absorbing surface.

Beyond the lack of motivation in the cited art to have made the presently claimed invention, the applicants note that the combination of the claimed components provide unexpected advantages as compared to the art cited by the Examiner.

Secondary considerations of patentability

While not believed necessary in view of the lack of an established *prima facie* case of obviousness, the applicants submit that the present specification details unexpected advantages obtained with the claimed invention, which demonstrate the unobviousness of the claimed invention.

The Examiner is requested to consider in this regard, a demonstrated unexpected improvement in scratch resistance with the claimed ink composition when a polyester resin of the claimed invention is included in the ink composition, as compared with a polyester resin with a glass transition temperature of 71°C. See pages 63-64 of the present specification. Moreover, the applicants have demonstrated an unexpected improvement in discharge stability of the claimed ink when the molecular weight of the polyester of the invention has a molecular weight in the range of 5,000 to 50,000. See pages 65-66 of the present specification wherein a polyester resin with a molecular weight of 51,000 provided less favorable results.

The claims are submitted to be patentable over the combination of art cited in rejections (1)-(5) and (16)-(18) and withdrawal of the rejections are requested.

**Rejections (7)-(10)**

Rejections (7)-(10) rely on D8 as a primary reference. The Examiner indicates in ¶12, on page 11 of the Office Action dated January 9, 2006, for example, that D13 teaches a glass transition temperature of 10-80°C for the polyester. As the details of now-canceled claim 3 have been added to claim 1, and hence is a requirement of all of the claims, the applicants presume that the Examiner would combine D13 in combination with the cited combination of references cited in rejections (8)-(10) if any of rejections (7)-(10) were maintained. The applicants believe however that the claimed invention would not have been obvious over the combination of cited art as, for example, the applicants have demonstrated that a polyester of the claimed invention with a glass transition temperature of over 70°C provides an ink composition which is less scratch resistant. The teaching in D13 therefore of use of a polyester with a glass transition temperature of up to 80°C would not have made the presently claimed invention obvious, especially in view of the demonstrated unexpected benefits of using a polyester of the claimed invention in the presently claimed combination of specific components.

The claims are submitted to be patentable over the combination of art cited in rejections (7)-(10) and withdrawal of the rejections are requested.

**Rejections (12)-(15)**



Rejections (12)-(15), like rejection (11), relies on D10 as a primary reference. The Examiner states at page 15, first paragraph, of the Office Action dated January 9, 2006 that D10 discloses the use of a nonionic surfactant. The applicants have described however an advantage to using a non-ionic surfactant in the claimed combination of specific components, as discussed above, and D10 fails to appreciate this advantage. The claimed invention would not have been obvious from any of the cited combinations of art which include a combination of D10 and D16. The further cited D4, D5, D12, D14, and D15 are not believed to cure the deficiencies of the combination of D10 and D16.

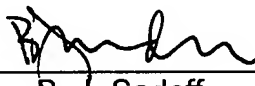
The claims are submitted to be patentable over the combination of art cited in rejections (12)-(15) and withdrawal of the rejections are requested.

The claims are submitted to be in condition for allowance and a Notice to that effect is requested. The Examiner is requested to contact the undersigned in the event anything further is required.

Respectfully submitted,

**NIXON & VANDERHYE P.C.**

By: \_\_\_\_\_

  
B.J. Sadoff  
Reg. No. 36,663

BJS:  
901 North Glebe Road, 11th Floor  
Arlington, VA 22203-1808  
Telephone: (703) 816-4000  
Facsimile: (703) 816-4100